

RESEARCH ARTICLE

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Interaction of Safety Climate and Safety Culture: A Model for Cancer Treatment Centers

Saeed Yari¹, Mohammad Hassan Naseri¹, Hamed Akbari¹, Saeed Shahsavari², Hesam Akbari^{1*}

Abstract

Background: In health care institutions, safety culture is defined as the integrity of individual and group efforts to reduce the harms for the patients. This is possible through interactions, attitudes, and understanding of safety matters. On the other hand, one of the indicators of the safety culture is the safety climate. **Objective:** The aim of this study is to investigate the interaction between safety climate and safety culture using structural equation modeling in personnel of cancer treatment centers in Iran. **Methods:** In this study, 680 personnel of Iran's hospitals were chosen in a random manner. Demographic (9 questions), safety culture (42 questions) and safety climate (37 questions) questionnaires were filled. The data were inserted in SPSS 20 software. Descriptive statistics method and Pearson's correlation coefficient were used to describe the data and evaluate the relation between the variables, respectively. Structural equations model was developed using AMOS 22 software and fitness of the model was tested by χ^2 , RMSEA, GFI and NFI statistics. **Results:** The scores of safety climate and safety culture were 3.61 and 3.30, respectively, which imply that they are suitable. The overall fitness of the model was acceptable. In this model, $\chi^2 = 8637.17$, $df = 2964$, $\chi^2/df = 2.914$, RMSEA = 0.058, NFI = 0.912, GFI=0.907, and CFI=0.875. In the regression analysis, there were positive significant relationships between safety climate and safety culture, safety climate and any of its components, and safety culture and any of the components. **Conclusion:** It was found that the safety climate and the safety culture had a positive impact on each other; so that with increasing safety climate, the safety culture also increases, and vice versa. Also, the level of education has a positive impact on safety culture and safety climate. So appropriate training can promote both variables in cancer treatment hospitals.

Keywords: Safety culture- safety climate- patient safety- cancer treatment center- modeling

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Introduction

In all organizations, especially those that offer people emergency services, an environment should be created, in which no harm or damage threatens the employees. So, the safety of the hospitals as the most important organization offering medical services requires special attention. A hospital needs to be a safe place for patients and the personnel (Yari, 2017; Yari et al., 2018). Safety climate is defined as a mental understanding of the personnel about organizational policies (Radzaz et al., 2013). One of the indicators of the safety culture is the safety climate, which refers to the common understanding of people about safety in the workplace (Chen et al., 2017).

Safety climate

Safety climate is widely considered as a criterion for assessment of safety level in work places (Budworth 1997). It presents an overall image of the safety situation

of an organization (Huang et al., 2007). Safety climate is multi-dimensional, but there is no consensus over the aspects of the safety climate (Budworth, 1997; Chen McCabe and Hyatt, 2017). Safety climate is defined as the common image that workers have in mind about policies, processes, actions, and priorities in workplace (Zohar 1980; Griffin et al., 2000). This was first measured by Zohar (1980). It is a measurement of the current state of the organization and it is relatively unstable based on time and place and changes due to circumstances (Lin et al., 2008). So, safety climate is highly under the influence of organizational and personal elements. It might affect safety behaviors of the personnel (Gatien, 2010). Researchers also found that the attitude of the workers regarding safety makes them search for safer environments, which in turn reduces unsafe behaviors and consequently improves safety situation (Jafari et al., 2014; Yari, 2015; Yari et al., 2018). Safety climate is defined as a psychological fundamental procedure, in which workers

¹Health Research Center, Lifestyle Institute, Baqiyatallah University of Medical Sciences, Tehran, ²Instructor of Biostatistics, Health Products Safety Research Center, Qazvin University of Medical Sciences, Qazvin, Iran. *For Correspondence: hesam120@yahoo.com